

orthodox drummer of civilisation, yet Macklin, more so than Shackleton, displayed an ability to vary his step according to circumstances throughout a colourful life of diverse activities.

There can be few medical men who have had a mountain named after them. On South Georgia, Mount Macklin (54°45'S, 36°03'W with twin peaks, the higher at 1900 m) in the Salvesen Range is an appropriate memorial to this most remarkable doctor.

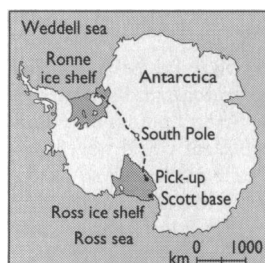
We are indebted to Mrs Jean Macklin of Aberdeen for giving access to and further information on her late husband's diaries and papers. This paper is an abridged version of SWMcG's presidential address to the Scottish Society of Anaesthetists in 1991.

1 King P, ed. *South: the story of Shackleton's last expedition 1914-17*. London: Century, 1991.

- 2 Shackleton EH. *South*. London: Heinemann, 1919.
- 3 Shackleton EH. *The heart of the Antarctic*. London: Heinemann, 1909.
- 4 Macklin AH. Snowblindness. *Lancet* 1926;ii:1226.
- 5 Macklin AH. The treatment of frostbite. *Lancet* 1925;ii:884-5.
- 6 Macklin AH, Hussey LDA. Scurvy: a system of prevention for a polar expedition, based on present day knowledge. *Lancet* 1921;ii:322-6.
- 7 Huntford R. *Shackleton*. London: Hodder and Stoughton, 1985:528-45.
- 8 Nansen F. *Furthest north*. London: Archibald, Constable, 1897.
- 9 Macklin AH. Influenza amongst the Lapps. *BMJ* 1920;i:465-6.
- 10 Macklin AH. The evacuation of sick and wounded from mobile columns [dissertation]. Manchester: University of Manchester, 1920.
- 11 Macklin AH. In: Wild JRF. *Shackleton's last voyage*. London: Cassell and Coy, 1923:35.
- 12 Macklin AH. Gas-oxygen as a routine anaesthetic; a summary of 200 cases. *Lancet* 1930;ii:1231-5.
- 13 Macklin AH. The asphyxial element in gas-oxygen anaesthesia. *Lancet* 1931;ii:897-901.
- 14 Macklin AH. Some ideas in regard to the meaning of student health and its assessment. *BMJ* 1956;ii:524-8.
- 15 Macklin AH. Three score and ten. *Zodiac—J* (Aberdeen University) 1960;7:42-5.
- 16 Robertson RB. *Of whales and men*. London: Macmillan, 1956-57.

Walking across Antarctica

Fiona Godlee



"An Englishman thinks he is moral only when he is uncomfortable," said George Bernard Shaw, and for a real expert at being uncomfortable you need look no further than Dr Mike Stroud. Earlier this year, after four attempts to walk to the North Pole, he and the explorer Sir Ranulph Fiennes completed the longest ever journey unsupported by men, animals, or machines and the first ever unsupported crossing of Antarctica. They were picked up—in Fiennes' words "more dead than alive"—after three months of extreme hardship, having hauled their sledges across more than 2000 km of frozen wastes and crevasses.

Poor short term memory was Mike Stroud's excuse when I asked him on his return why he put himself through such trials. He said that he forgets the bad bits. But bad bits there definitely were. On the third day of the Antarctic crossing Stroud nearly died when he fell into a crevasse. He was saved only by a crumbling ice bridge 20 feet below the surface. His sledge, which fell with him, was badly damaged. A faulty stove nearly set their tent and equipment on fire, including the vital radio with which they would eventually call to be picked up. After a month of walking in rigid ski boots—chosen instead of flexible boots so as to be able to pull the heavy sledge—an old ulcer on Fiennes's foot opened up. From then on until after the end of the expedition he was in constant and severe pain. Stroud lost his ski sticks, broke the bindings of his skis, and fractured his ankle. With wind chill temperatures as low as -85°C , both men suffered frostbite, diarrhoea, black depressions, and extreme hunger. Not, you might say, easy things to forget.

The call

Stroud, now 39 and working as a senior medical research officer for the Ministry of Defence, first set his sights on the Antarctic after seeing some photographs taken by a friend at medical school. "It really can be very beautiful," he said. After completing his house jobs in 1980 he joined the British Antarctic Survey, working as a doctor for three months, but found the experience limiting because safety regulations prevented him from straying far from the base. He returned, via South America, to England and senior house officer jobs. Three years later he was asked to join the Footsteps of Scott expedition and leapt at the chance. This was a one way unsupported walk to the

South Pole led by Robert Swan and Roger Mear. In the end Stroud was not selected as one of the walkers—something he still recalls with frustration—and he spent the year as the base camp doctor. Soon after his return, however, he received a call from Fiennes asking him to join him in a two man unsupported walk to the North Pole.

Stroud readily admits that he was some way down Fiennes's list of potential companions. His name was suggested when none of Fiennes's previous team members could go. The two men had never met, and since the plan was to manhaul sledges across the ice, carrying everything with them, Fiennes had envisaged a large brute of a man who would pull great loads without question. Stroud is not a large brute of a man—in fact in his book he describes himself as "very small." So how does he explain his ability? "In the end there are other things that are more important than size," he said, "and the most important of all is your mental attitude."

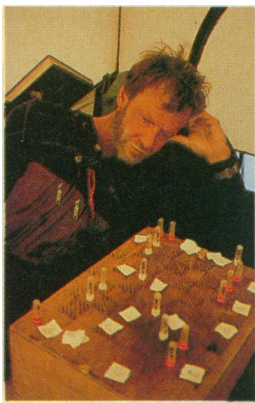
The idea to walk across the Antarctic continent had its roots in Sir Ernest Shackleton's heroic but failed attempt of 1914-16. Before he and his men reached even the starting point of the journey their ship, the *Endurance*, was crushed by pack ice in the Weddell Sea (p 1597). He led his men to safety by making the crossing to South Georgia—800 miles across the Southern Ocean in an open boat. Since then several groups have crossed the continent: Dr Vivian Fuchs and Sir Edmund Hillary in 1957, Fiennes and others in 1980-1, and two teams—one led by Will Steger, the other by Reinhold Messner and Arved Fuchs—in 1990-1. All, however, were supported, either by airdropped supplies or by using dogs or machines for transport. Fiennes and Stroud aimed to make the crossing without support of any kind. Fiennes initially refused even the assistance of wind power, but was persuaded that without sails they wouldn't make it. Even so, Fiennes admitted to Stroud that he believed they were attempting the impossible.

A flair for hardship

I first met Mike Stroud in 1988 when he was a medical registrar at St Thomas's Hospital in London. It was hard then—as it is now—to associate the news stories of heroic feats and failures with this slight, quietly spoken man, the more so because he never seemed to capitalise on his adventures. One day he

British Medical Journal,
London WC1H 9JR
Fiona Godlee, assistant editor

BMJ 1993;307:1599-601



Using urine samples for chess

would be on the ward and the next, or so it seemed, you would bleep him and the person answering would say, "I'm afraid Mike's not here. He's just gone off to the North Pole."

This was, I realise now, a reflection of Stroud's diffidence rather than of the cavalier nonchalance that lovers of eccentric explorers in the British amateur tradition would like to imagine. Fiennes plays up to the image in his public presentations and his books, joking about their equipment being far too heavy and glorying in the ingenuity and stiff upper lip needed to overcome breakages and frostbite. But Stroud is uncomfortable with the act. He is baffled by unfavourable comparisons with the Norwegian lawyer, Erling Kagge, with whom Fiennes and Stroud have been in unwilling competition at both ends of the earth. When Kagge announced that he was also planning to cross the Antarctic unsupported in 1992, the resemblance to the Scott-Amundsen race was too much for the press. Reports portrayed Kagge as an elite superfit cross country skier (which he undoubtedly is) who was properly equipped, well advised, and professional. The same reports portrayed Fiennes and Stroud as bungling amateurs who were determined to do things the hard way. Kagge's apparently trouble free solo walk, which got him to the South Pole 10 days before Fiennes and Stroud, seemed to confirm the stereotypes. But, unlike the Britons, Kagge had decided not to go beyond the pole and was therefore carrying less weight. "The idea that he was somehow better equipped than us, using lighter gear and a better route, is just bloody daft," said Stroud. "We were going twice as far and therefore carrying more and going slower. There was no race. It just fitted the image."

Still, the written accounts of their trip do nothing to dispel the British stereotype of doggedness and flair for hardship. Pulling 220 kg (485 lbs) each—the equivalent of three average sized adults, weights they could hardly drag on the flat let alone over compacted ice ridges—they would have to cover a gruelling 25 km a day every day in order to reach their goal within the 100 days for which they had fuel and food. When they found they were covering only about 16 km a day they decided to throw out some of the food and fuel and, amazingly, their down jackets, to lighten the load.

Initially the 5600 calories a day (in the form of freeze dried rations—which Stroud describes as "very appetising") were more than they could eat. (This is nearly double a person's normal intake.) But soon they were eating it all, and from day 40 they were permanently hungry. By the time they reached the pole after 68 days they were burning off 3000 calories more than

they were eating. This meant that they were on the equivalent of a starvation diet under normal circumstances. Both had lost 20 kg and were extremely weak. They were only able to continue by increasing their daily intake to nearly 7000 calories, knowing that this would mean cutting down to half rations later on. When that time came their hunger became uncontrollable. They would both eat the two small chocolate bars, intended for the middle of the day to ward off hypoglycaemia, before leaving the tent in the morning. "Having them in your pocket was too unbearable," said Stroud. "It was better to have nothing for the whole day than to know that there was some food that you could get at."

Beyond the laboratory

The human body is extremely efficient. No machine or animal could carry its fuel for such a distance, although dogs can of course eat each other—something that Amundsen took into account in his decision to use them in 1910. Stroud's metabolic research during the expedition showed that he and Fiennes were living off their own muscle. Measurements with deuterium labelled water (necessitating five 24 hour urine collections, at the cost of mild penile frostbite) showed that more than half of their weight loss was from muscle.

The measurements showed what happens to the human body under extremes of exercise and starvation—the sort of research which, as Stroud points out, you couldn't do in the laboratory because you'd never get people to eat so inadequately while exercising so hard. Interestingly, their metabolic rates increased considerably despite extreme dietary restriction, something that has not been described before. Stroud insists that these results, gained under such extraordinary circumstances, have a bearing on normal life. "We were eating double the normal intake and yet we lost weight. It's the ultimate example of how exercise can induce weight loss." Dieting depresses the metabolic rate, he explained, making the body more efficient. This means that trying to lose weight by dieting alone quickly becomes unsuccessful. Exercising as well lessens or stops the reduction in metabolic rate. Stroud also found that their lipid profiles improved despite eating a diet of 57% fat—illustrating, he says, "that you can eat what you like in terms of lipids if you do enough exercise."

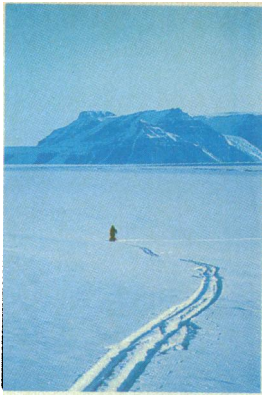
With the weight loss came loss of power. Measurements taken at the end of the expedition showed that Stroud's leg strength had more than halved. The two men's aerobic capacity had also fallen, despite three months of sustained effort—suggesting that the inadequate nutrition had caused loss of cardiac as well as skeletal muscle. Failing eyesight was another problem, one that Fiennes had experienced in the Arctic, in that case due to retinal damage caused by the glare. This time both men found their vision declining. It seems that long periods of focusing on an empty middle distance weakens the accommodation muscles of the eye—something that, in aeroplane pilots, can lead to mid-air collisions.

The third man

Towards the end they recorded blood glucose concentrations almost incompatible with life—as low as 0.2 mmol/l—accompanied by massive growth hormone surges, which make it unlikely that the levels were artefactual. Such low blood glucose may have contributed to the mixing of reality and imagination experienced by many polar explorers and well described by Stroud. Shackleton and his team were aware of the so called "third man," a comforting presence

Stroud and Fiennes at the start of the walk





A single track in the wilderness

seen by some of them, who they looked on as their guardian. T S Eliot describes the experience in *The Waste Land*. Stroud didn't experience this, but visions of home life would merge with the icescape, making it difficult to distinguish reality from fantasy.

Christmas day—still three weeks from the pole—was, writes Stroud “bloody awful. . . . The icy wind blew harder and harder across our path, and I wanted nothing else but to give up. To make matters worse, we soon hit a hill so steep that we could have been back at the beginning of our ascent. In ever decreasing visibility, we dragged our virtually immovable loads up the merciless slope. We were back to needing rest stops, unable to maintain the crushing effort.”

Having the means to call for rescue at any time brought terrible temptation. Stroud fantasised about feigning illness to bring an end to the pain and hunger—a subarachnoid haemorrhage, appendicitis, kidney stones; “A complete almanac of possible medical conditions ranged through my head,” he writes in his book.

Alternatively I could just decide to give up openly and frankly, to be proud of my human weakness rather than my inhuman dogged stupidity. After all, what sort of prat thought it was macho to be on a crossing of Antarctica? The real challenges in life lay with people, relationships, spiritual development. You wouldn't catch D H Lawrence out here. No, I'll just call Ran and put it to him straight, and if he doesn't like it he can stick it.

One or other plan was constantly close to fruition. I would be on the very verge of calling out ‘Ran... Ran, stop! A pain... my neck.’ It would be so easy, and after that there would be the tent and no restriction on food, then the aircraft, civilisation, and home.

Frightened of his own weakness, he told Fiennes of the possibility that he might feign illness and so removed this avenue of escape.

Falling out

The relationship between the two men seems to have been based on mutual but somewhat grudging respect and a great deal of competition. The grit and emotional restraint are pure English public school. (When Stroud staggered back to the camp after being dragged for hundreds of yards when his sail was caught by the wind, Fiennes simply remarked, “Interesting technique, but I don't think it'll catch on.”) But Stroud believes that they got on as well as any men could do under such circumstances.

Afterwards, things deteriorated sharply with the press coverage of the trip and the publication of their separate books. In his book Stroud is blunt about the stresses between them during the trip, and in the last chapter, titled “Also Ran,” he accuses Fiennes of distorting the story of the expedition and belittling his part in it. Fiennes's book, *Mind over Matter* is full of sideswipes against Stroud and references to the importance of his own leadership. Both books contain an odd mixture of heroism and pettiness, each man noticing who was pulling more weight, walking faster, or navigating straighter. Stroud says that his book was misrepresented by the press and that Fiennes, who had not read the book when the reviews came out, altered his own account in response. “Ran's book implies that we fell out and we didn't. We had bad times and behaved like tired children, but what else do you expect?”

The Gate to freedom

So back to the old question—why do it? In his book

Stroud writes: “You don't worry about the usual things when you climb up a mountain. . . . The Polar regions are merely a bigger step away, a stride so large that you reach another planet. By stepping so far from normal existence you see your life as a whole in a different perspective.” After 90 days they reached the bottom of the 2700 m Beardmore glacier and sighted “The Gate,” the vital pass through to the Ross ice shelf discovered by Shackleton in 1908. Stroud writes:

We approached the col together. It was so late in our evening that the sun was in the north, and we came up in deep shadow. Ahead, through the narrow saddle the sky was ablaze, and as we climbed those last few yards the grey unlit snow ignited round our feet. We reached the divide and stood in silence. Behind us the dark valley of our journey, three months of mental and physical hell, before us a sunlit world of freedom. A snow covered slope, flanked by scree, dropped steeply to merge with the ice-shelf in another region of cracks. Further out there were more local disturbances but the eye didn't rest there. It was the world beyond that drew our gaze. The whole vastness of the Ross ice-shelf lay in front of us, stretching east, west, and north to the horizon. We had completed our journey. Whether we stopped here or carried on, this was the place that would mark our accomplishment. Here, and at that moment, we had reached the shore of the Pacific Ocean.

Ran smiled. I pushed back the tears. We shook hands.

A sense of failure

They had crossed the Antarctic land mass but the ice shelf lay between them and the sea. The ice shelves are not strictly part of the continent, but crossing from sea to sea remained an objective, a legacy of the days when expeditions were dropped and picked up by ship. By now exhausted, with Fiennes in constant pain from the ulcer on his foot and Stroud prey to repeated bouts of hypoglycaemia, and with both men's resistance to cold severely reduced, they pushed on for four more days before deciding enough was enough.

The decision to stop when they did may have saved their lives, but it is something that Stroud clearly finds hard to live with. Despite having completed the longest ever unsupported journey and the first unsupported crossing of Antarctica he feels that they failed in what they set out to do. “I know that we did vastly better than anyone could have anticipated,” he said. “We ourselves never envisaged we could get those weights up to the pole, let alone go on and cross the continent. But I felt, from a historical and a romantic point of view, that the ice shelves were part of the journey, and so to my mind we did fail in our overall goal.”

And so crossing Antarctica unsupported is still, he believes, one of the few “firsts” left to be done. Real firsts, that is, as opposed to contrived firsts—“like crossing the antarctic on a pogo stick”—which don't interest him. “It may seem a long way to go just to finish something,” he said with a quick smile, “but I'd do it all again to try and succeed.” At the end of his book he writes:

Even though I can clearly remember saying to myself every day of the journey “I must never do this again,” I don't feel now as I did then. The memory deficit is playing its tricks already and a restlessness is beckoning. I can see challenges waiting to be met, most of them probably impossible, but so was our unsupported crossing of Antarctica before we did it. If I were given the chance, I would go back tomorrow to repeat the journey and finish what was left undone.

Photos in this article are from *Shadows on the Wasteland: Crossing Antarctica with Ranulph Fiennes* by Mike Stroud (London: Jonathan Cape, 1993). Signed copies of the book are available from “Poles Apart,” Lane End, Hambledon, Surrey GU8 4HE, price £14.99 including postage and packing.